

REMARKS/ARGUMENTS

Claims 1-2, 4-9, 13, 15-18 and 19-23 are active.

Claim 1 is amended to correct the typographical error noted in the objection at page 2 of the Official Action.

No new matter is added.

Applicants thank Examiner's Sample and Nelson for the courtesy of discussing this case with their undersigned representative on August 13, 2009. During this meeting, it was explained that the cited **Joret** patent only discloses a mixture of two distinct oxides in a single layer rather than a single oxide phase comprising Zn and Sn. It was also emphasized that the phrase "a mixed oxide of Sn and Zn" as defined in the claims necessarily excludes a mixture to two oxides as in **Joret**. Further details of this discussion are provided and expanded upon in the remarks below.

The claims here are to a transparent (e.g., glass) substrate with an antireflection laminate including 4 layers with the first and third layers having refractive indices of 1.8 to 2.2 and the second and fourth having an Ri of 1.35 and 1.65. Each layer is also defined by a particular geometrical thickness and as noted above, each layer is defined by specific oxides that are comprised in those layers.

The main focus of this application relates to antireflection coatings for windows in buildings, display cabinets, etc.

In the Action, the Examiner has again rejected claims 1, 2, 4-9, 13, 15, 19-21 and 23 under 35 USC 102(b) in view of Joret, FR 2,800,998 (citing to the U.S. equivalent U.S. 6,924,037).

Joret describes a four-layer laminate antireflection coating including a variety of oxides (see the paragraph bridging col. 4-5).

In col., 4, lines 32-38, Joret describes that “The materials most suitable for forming the first and/or the third layer, those having a high index, are based on one or more metal oxides chosen from zinc oxide ZnO, tin oxide SnO₂ and zirconium oxide ZrO₂. They may also be based on one or more nitrides chosen from silicon nitride Si₃ N₄ and aluminium nitride AlN.”

In Examples 1-13, the four layers include SnO₂, TiO₂ and Si₃N₄ (col. 9-13).

Joret neither describes or suggests the specific arrangement of layers in which the first and third layers comprise a **doped** mixed oxide of Sn and Zn; and the second and fourth layers comprise SiO₂. Joret does not describe this arrangement in the claims.

In maintaining the rejection, the Examiner picks different portions of the Joret disclosure to allege that Joret describes exactly that which is claimed. For example, while Joret suggests doping in col. 2, this disclosure with the possible option of mixing two oxides (see col. 4, lines 32-33: “one or more”) is not sufficient to anticipate the claims. Second, while the data in the Table (col. 13) does appear to indicate a difference (lowering) of the light reflection between Examples 1 and 4, these Examples (A) are both composed with monolithic layers and (B) do not include doped mixed Sn and Zn oxides (see col. 8-10).

While Applicants understand that a prior art disclosure is not limited to its preferred embodiments but rather all that it teaches, it is also the law that “It is not sufficient that each element be found somewhere in the reference, the elements must be ‘arranged as in the claim.’” Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Co., 730 F.2d 1452, 1458 (Fed. Cir. 1984). See also Ex parte Standish, 10 USPQ2d 1454, 1457 (Bd. Pat. App. & Int’f 1989) (“anticipation of a claimed product cannot be predicated on mere conjecture as to the characteristics of a prior art product”).

In the case of Joret, it simply is not reasonable that by merely suggesting a plethora of possible options, this is sufficient to put the specific layers with specified compositions as defined in the claims in the possession of the public. Joret simply has not arranged the elements of the claims as the law requires.

In the Action at page 3 and noted during the aforementioned meeting, reliance on the discussion in col. 4, lines 32-38 was deemed to be relevant for the limitation in the claims “doped mixed oxide of Sn and Zn.” Applicants respectfully disagree and note that reliance on this text in Joret is misplaced.

That is, Joret in col. 4 is directed to an embodiment similar to that in col. 4, lines 14-31 where two distinct oxides are mixed in a single layer so as to obtain an intermediate refractive index. It is clear that obtaining an intermediate optic index is possible if the two single oxide phases remain structurally unchanged, otherwise a new single phase obtained from the two initial oxides would have very different properties, particularly in a different refractive index. A mixture of two distinct oxides as in Joret is not the same as a mixed oxide of Sn and Zn, e.g., a mixture of two distinct oxides would be Sn oxide and Zn oxide. There is no teaching in Joret, specifically, for a unique single mixed oxide of Sn and Zn as provided in the claims.

While Applicants understand that, during the prosecution of an application in the Office, claims are to be given their broadest reasonable interpretation consistent with the teaching in the specification (*In re Bond*, 710 F.2d 831, 833 (Fed. Cir. 1990)), it is error to disregard express limitations in the claims. The plain language of Applicants’ claims requires “doped mixed oxide of Sn and Zn” which is well-known in the art not to be the same as a mixture of two distinct oxides.

Further, one would not have modified Joret to achieve what is claimed. The stack disclosed in Joret ‘s reference is designed for reducing the reflection with a angle of

incidence of 60° (see also the colorimetric values a^* , b^* , L) for automotive application, 60° is approximately the angle between the windshield and the car body. It is understood in the art that normal incidence means that the user is in front of the coating glass and that user looks at the glass with an angle of 90° in comparison with the substrate. This is the typical normal situation when an user is in front of a coating glass for building (the glass is positioned vertically) and the antireflective coating is directly in line with the eyes of the user. An angle of incidence of 60° is the typical for automotive application. The windshield has an angle of 60° in relation to the car body. The user sees the coating windshield with an angle which is not "normal" (an angle of 90°) and the color box (the optical properties of the antireflective coating, the value of a^* , b^*) is designed for this specific angle of angle for an automotive application.

In response of the angle of incidence, the Examiner continues to rely on Joret's examples in col. 13 (see page 3 of the Action). The data Table presented in col. 13 of Joret describes a RL at normal incidence (0°) which according to the wording in Joret as well as the present application means that the difference with regard to the "ideal normal incidence" is nil. In other words, the angle reported in the brackets does not refer to the angle of incidence itself but the difference with respect to the normal incidence, that is an angle of 90° between the incident light and the substrate.

In one aspect of the claimed invention, the stack of layers is designed for a normal incidence and the inventors obtain the best result in term of RL% and value of the color box (value of a^* , b^* , L) at this normal incidence angle.

Accordingly, the claims are not anticipated by what is described in Joret nor would the claims have been obvious. Withdrawal of the rejection is requested.

U.S. application serial no. 10/519,098
Reply to Official Action of June 4, 2009


A Notice of Allowance for all pending claims is kindly requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.
Norman F. Oblon

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)



Daniel J. Pereira
Registration No. 45,518

1783207_1.DOC